



STATE OF MARYLAND

DHMH

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October 21, 2011

Public Health & Emergency Preparedness Bulletin: # 2011:41 **Reporting for the week ending 10/15/11 (MMWR Week #41)**

CURRENT HOMELAND SECURITY THREAT LEVELS

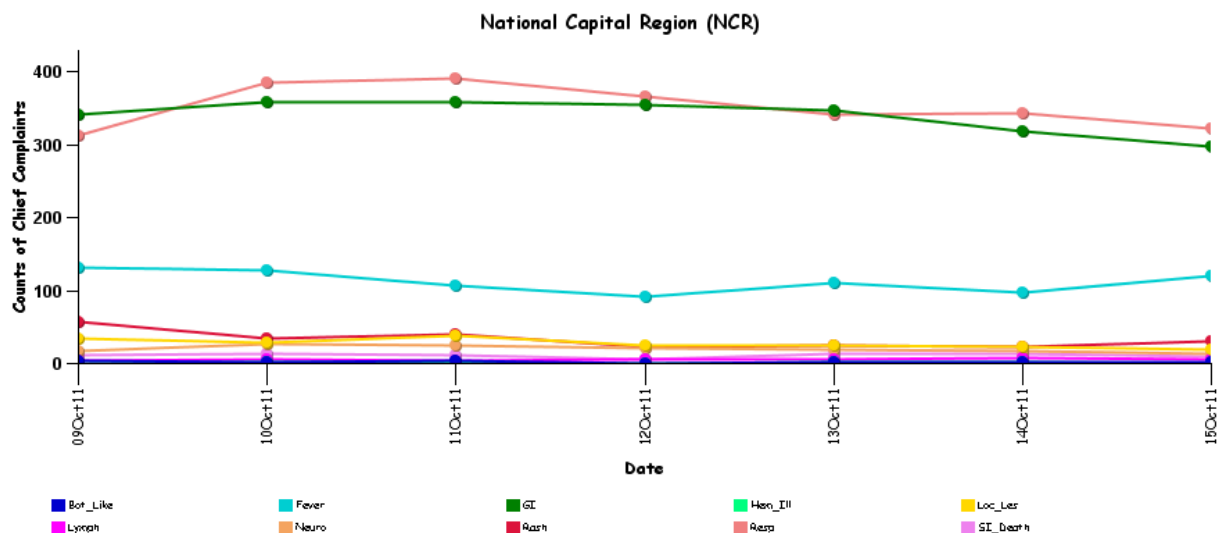
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

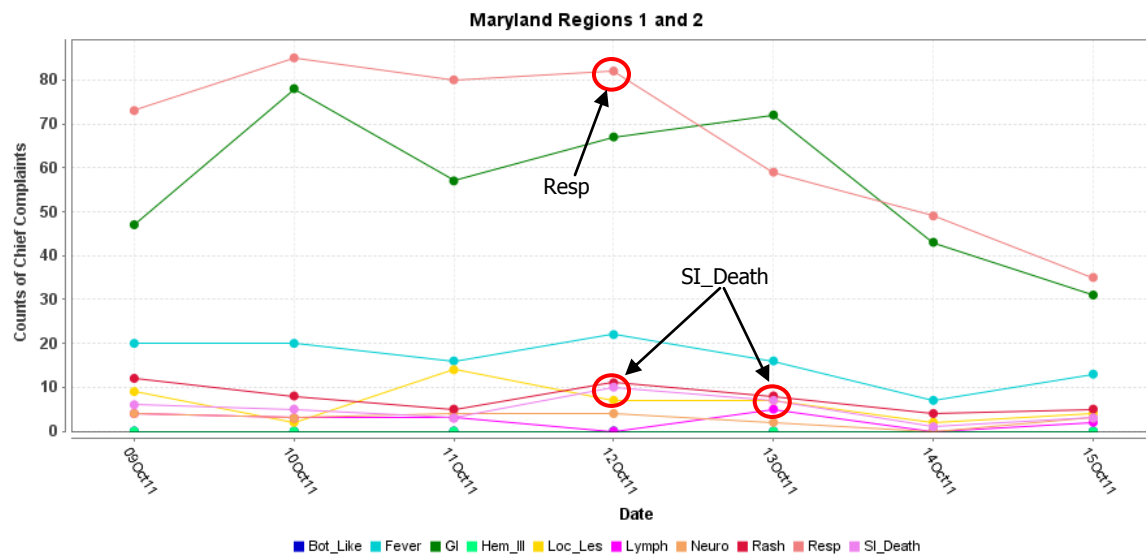
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

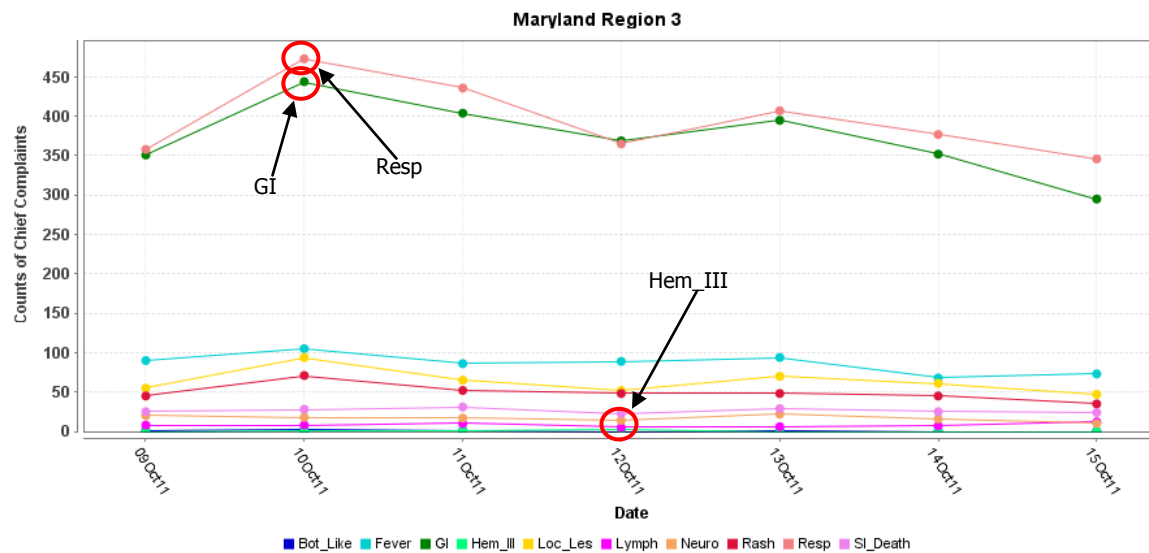


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

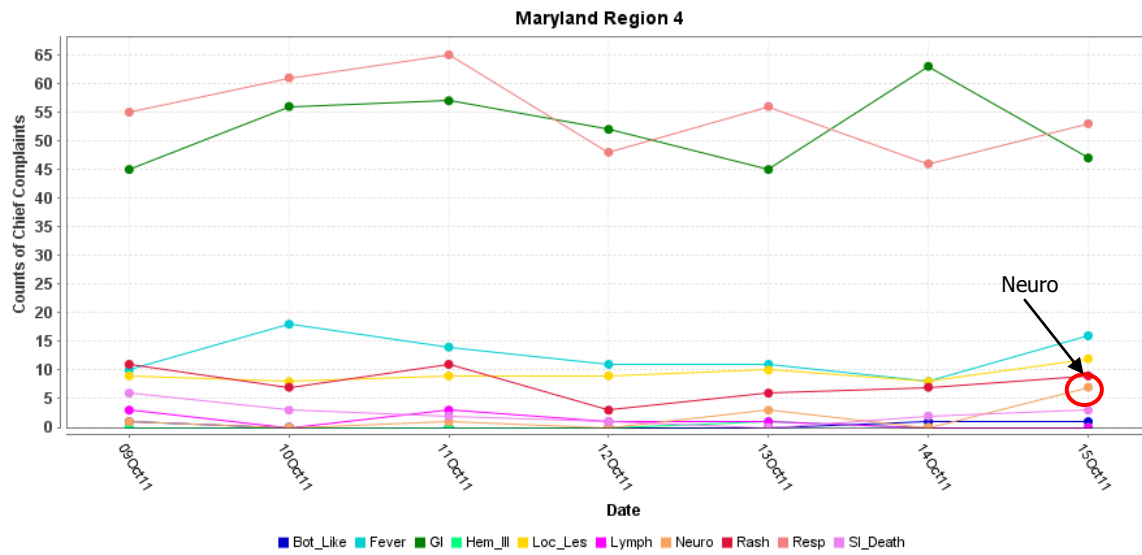
MARYLAND ESSENCE:



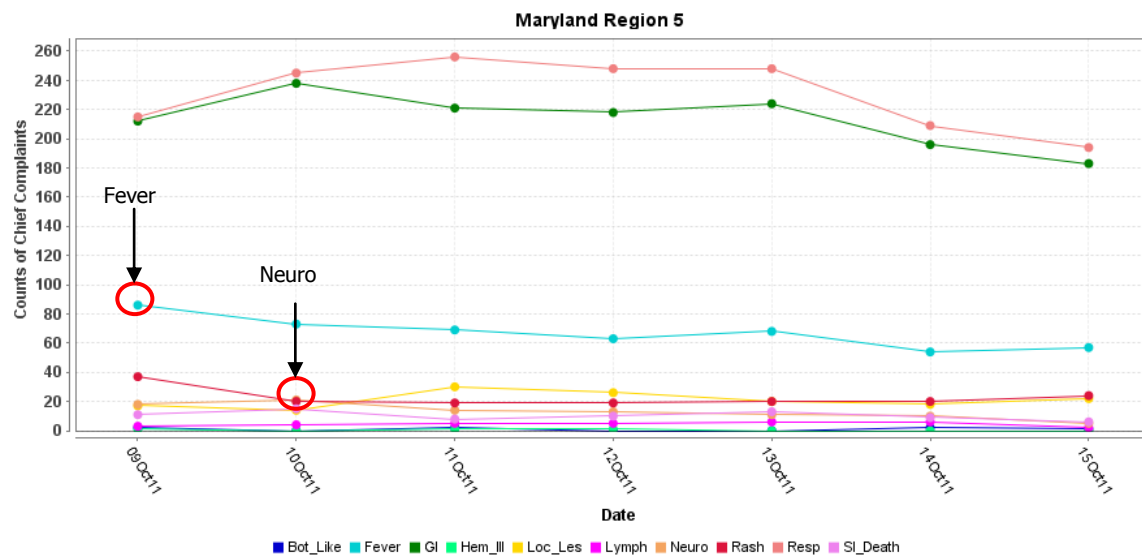
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

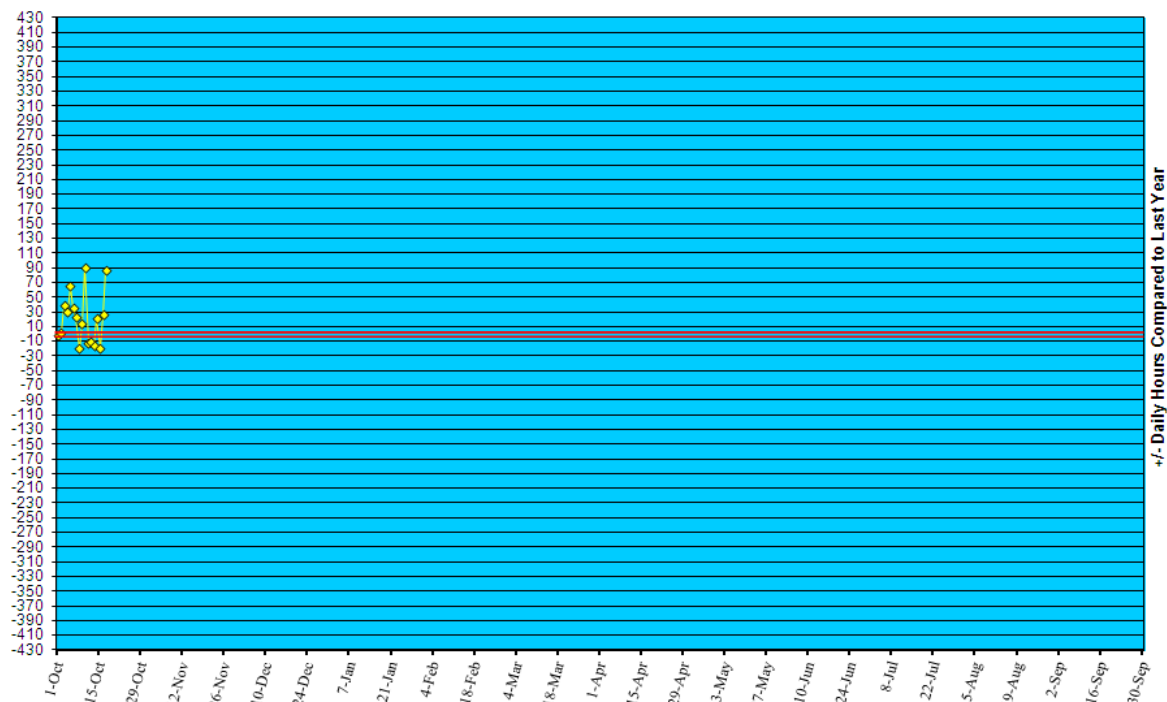


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '11 to October 15, '11



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in September 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (October 9 – October 15, 2011):	12	0
Prior week (October 2 – October 8, 2011):	17	0
Week#41, 2010 (October 10 – October 16, 2010):	14	0

2 outbreaks were reported to DHMH during MMWR week 41 (October 9 – October 15, 2011).

1 Gastroenteritis outbreak

1 outbreak of GASTROENTERITIS in an Assisted Living Facility

1 Respiratory illness outbreak

1 outbreak of PNEUMONIA in a School

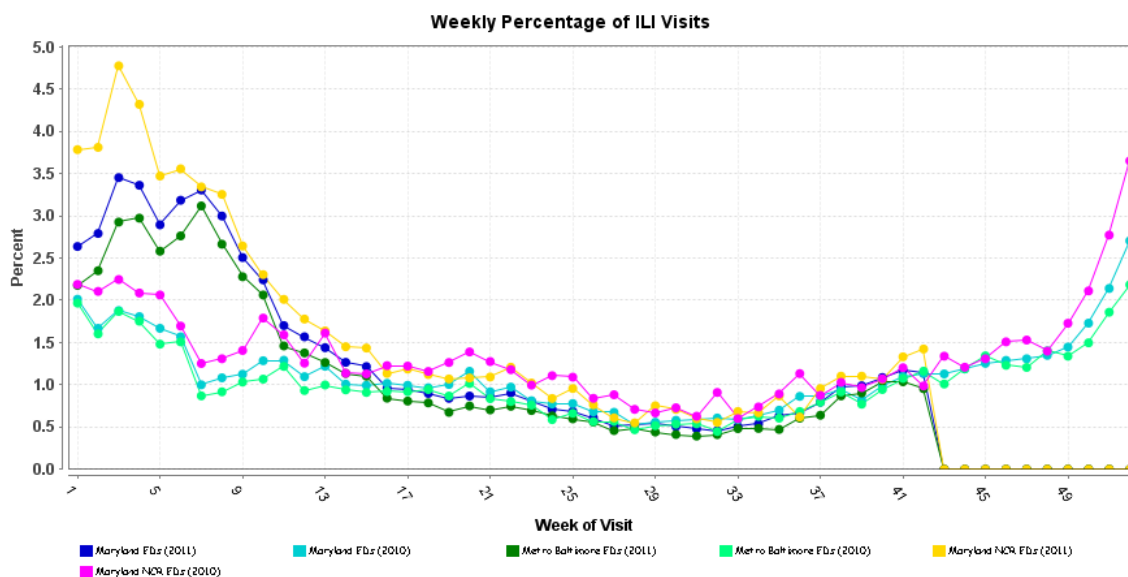
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May.

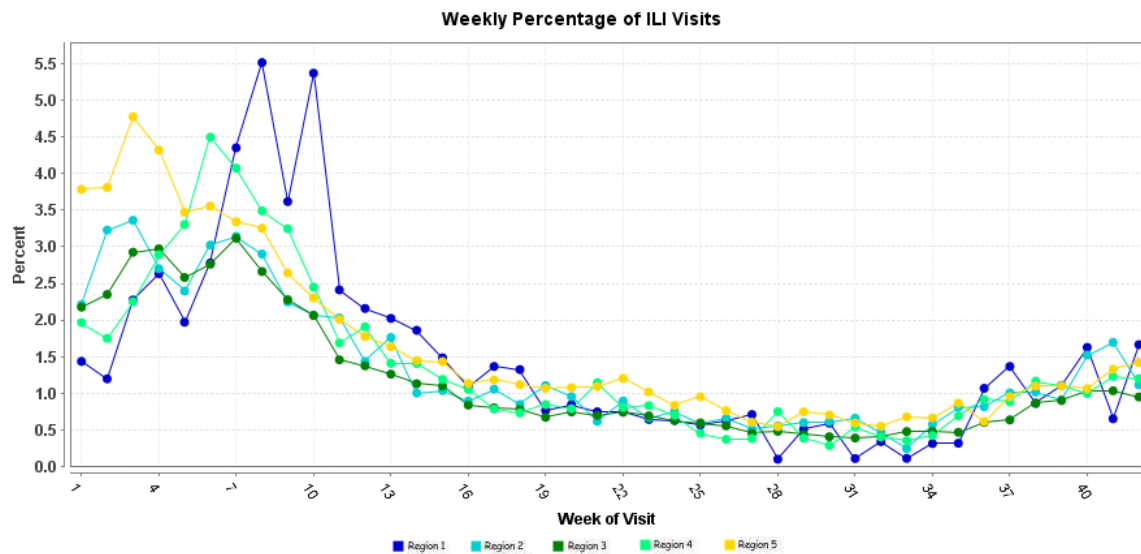
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.

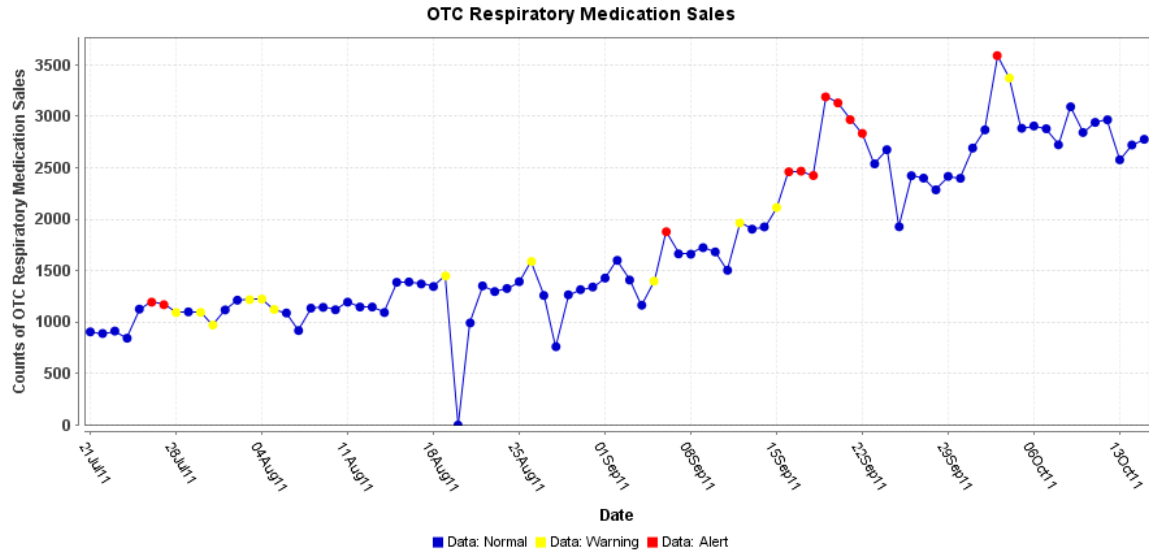


* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



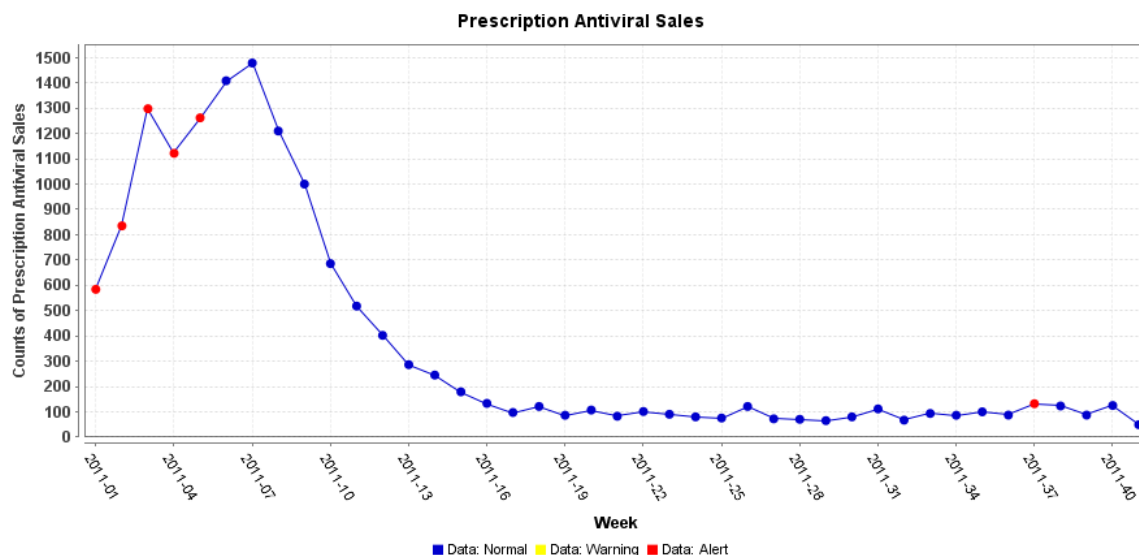
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of September 16, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 564, of which 330 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA: 26 September 2011, H5N1 bird flu [avian A/H5N1 influenza virus] can kill humans but has not gone pandemic because it cannot spread easily among us. That might change: 5 mutations in just 2 genes have allowed the virus to spread between mammals [ferrets] in the lab. What's more, the virus is just as lethal [to ferrets] despite the mutations. "The virus is transmitted as efficiently as seasonal flu," says Ron Fouchier of the Erasmus Medical Centre in Rotterdam, the Netherlands, who reported the work at a scientific meeting on flu last week in Malta. "This shows clearly that [the H5N1 virus] can change in a way that allows transmission and still cause severe disease in humans. It's scary," says Peter Doherty, a 1996 Nobel prizewinner for work in viral immunology. H5N1 evolved in poultry in east Asia and has spread across Eurasia since 2004. In that time, 565 people are known to have caught it; 331 died. No strain [of the avian H5N1 virus] that spreads readily among mammals has emerged in that time, despite millions of infected birds and infections in people, cats and pigs. Efforts to create such a virus in the lab have failed, and some virologists think H5N1 simply cannot do it. The work by Fouchier's team suggests otherwise. They 1st gave H5N1 3 mutations known to adapt bird flu to mammals. This version of the virus killed ferrets, which react to flu viruses in a similar way to humans. The virus did not transmit between them, though. Then the researchers gave the virus from the sick ferrets to more ferrets, a standard technique for making pathogens adapt to an animal. They repeated this 10 times, using stringent containment. The 10th round of ferrets shed an H5N1 strain that spread to ferrets in separate cages and killed them. The process yielded viruses with many new mutations, but 2 were in all of them. Those plus the 3 added deliberately "suggest that as few as 5 are required to make the virus airborne," says Fouchier. He will now test H5N1 made with only those 5. All the mutations have been seen separately in H5N1 from birds. "If they occur separately, they can occur together," says Fouchier. Malik Peiris of the University of Hong Kong, a flu virologist, says this means H5N1 transmissible between humans can evolve in birds, where it is circulating already, without needing to spend time in mammals such as pigs. Peter Palese, a flu specialist at Mount Sinai Medical Center in New York City who has expressed doubts that H5N1 can adapt to mammals, is not convinced. "Ferrets are not humans," he says. "H5N1 has

been around for a long time" and failed to mutate into a form that can jump between people. "That it has not adapted doesn't mean it cannot," replies Jeffery Taubenberger of the US National Institutes of Health in Bethesda, Maryland, who studies how a bird flu became the deadly pandemic of 1918. "It simply means that so far, it has not, luckily for us."

NATIONAL DISEASE REPORTS

TULAREMIA (DE): 11 October 2011, On Thu 6 Oct 2011, the Delaware Public Health [DPH] Laboratory confirmed Delaware's 1st case of tularemia since 2003, in a 45 year-old Kent County man. The man is hospitalized and responding to treatment. Although Delaware has not reported a case of tularemia in 8 years, each year an estimated 125 to 150 cases are reported nationwide. Tularemia is associated with tick bites and is not spread person to person. Domestic cats are very susceptible to tularemia and have been known to transmit the bacteria to humans. Humans can become infected by handling infected animal tissue when hunting or skinning infected rabbits, muskrats, and other rodents; by inhaling dust or aerosols contaminated with the bacteria, such as during farming or landscaping activities, especially when tractors or mowers run over an infected animal or carcass. The disease can also be transmitted by drinking untreated water contaminated with the bacteria introduced by animal contact. Symptoms of tularemia usually appear 3 to 5 days after exposure to the bacteria, but can take as long as 14 days. Symptoms may include sudden fever, chills, headaches, diarrhea, muscle aches, joint pain, dry cough, and progressive weakness. People can also develop pneumonia with chest pain, cough, and difficulty breathing. Other symptoms of tularemia depend upon how the person was exposed. These symptoms can include ulcers on the skin or in the mouth, swollen and painful lymph glands, swollen and painful eyes, and a sore throat. "Preventing tick bites is the best way to protect yourself from tularemia," said Dr Karyl Rattay, DPH director. "Use insect repellent containing DEET on your skin, or treat clothing with repellent containing permethrin, to prevent insect bites." In addition, use care and wear gloves when handling sick or dead animals. Be sure to cook food thoroughly and that your water is from a safe source. Note any change in the behavior of your pets (especially rodents and rabbits) or livestock, and consult a veterinarian if they develop unusual symptoms. (Tularemia is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

LEGIONELLOSIS (MD): 12 October 2011, Maryland Department of Health and Mental Hygiene (DHMH) Laboratories Administration testing confirmed the presence of *Legionella* bacteria in water collected at the Plim Plaza Hotel in Ocean City, Maryland. *Legionella pneumophila*, the bacteria that cause Legionnaires' disease, was detected in water collected from various locations at the hotel. An ongoing investigation by the Worcester County Health Department and DHMH has identified 3 additional cases of Legionnaires' disease in people who had stayed at the hotel. This is in addition to the 3 cases announced by the health department last week, for a total of 6 confirmed cases. One person, an elderly out-of-state resident, died. The Worcester County Health Department and DHMH continue to work with the Plim Plaza Hotel management to investigate this situation. Legionnaires' disease, also called legionellosis, is a form of pneumonia caused by inhaling mist or vapor from water containing the *Legionella* bacteria. People may develop the disease approximately 2 to 14 days following exposure to the bacteria. Although the hotel is currently closed for the season, anyone who was a guest at the Plim Plaza hotel in the month of September [2011] and is experiencing pneumonia-like symptoms should contact his or her health care provider to determine whether testing or treatment is recommended. The disease can be treated with commonly available antibiotics. Legionellosis is not spread from person to person. There have been 93 confirmed cases of Legionnaires' disease reported this year in Maryland. On average 100-130 cases are reported statewide annually. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

SCOMBROID POISONING (USA): 12 October 2011, Osamu Corporation of Gardena, California, is recalling up to 1800 cases, lot number 7013, of frozen ground tuna because the FDA found decomposition in several samples of the product and also found elevated histamine levels in samples taken from a retail location. Osamu Corporation is recalling the product in an abundance of caution since decomposed product may promote formation of histamine. Histamine consumed in food can cause reactions that exhibit symptoms of tingling or burning sensation in the mouth, facial swelling, rash, hives and itchy skin, nausea, vomiting or diarrhea. However, individuals may experience symptoms differently. Persons developing these symptoms should seek medical attention. The frozen ground tuna was shipped to 3 distributors from 18 Aug 2011 to 8 Sep 2011. The distributors have removed the product from the marketplace and are destroying any remaining product. The 3 distributors are AFC Corporation, Red Shell Foods, and Pacific Fresh Fish Company. 2 of these distributors have sushi franchises located in grocery stores. Stores and locations to which this product was shipped are listed at the bottom of this announcement. One, Pacific Fresh Fish Company of Los Angeles, is a cash and carry establishment. Consumers concerned about whether the sushi they purchased may contain the ground tuna should check with the store where they purchased the sushi. That store will be able to determine if it used the recalled product to prepare the sushi. At this time Osamu does not believe that the recalled product or sushi made with the recalled product is available for purchase by consumers. 3 illnesses due to elevated histamine levels have been reported to date, all involving sushi purchased at a single location. The cause of the elevated histamine levels found in the ground tuna at that location is presently unknown. Red Shell Foods has sushi franchises in grocery markets in the state of California in the following cities: Calabasas, Century City, Dana Point, Encino, Hollywood, Irvine, Los Angeles, Marina del Rey, Newport Beach, North Hollywood, Northridge, Pacific Palisades, Pasadena, Santa Barbara, Sherman Oaks, Silverlake, Tarzana, West Hollywood, and Westlake Village. AFC has sushi franchises at counters in grocery stores in nearly every state. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

Q FEVER (WA): 13 October 2011, On 22 Apr 2011, the Q fever bacterium *Coxiella burnetii* was detected in a goat placenta collected from a farm in Washington, where 14 of 50 (28 percent) pregnant does had aborted since January 2011. A county health alert advised health-care providers to ask patients with symptoms compatible with Q fever (e.g., fever, headache, chills, and myalgia) about exposure to goats, and the owners of the farm informed purchasers of their goats that

Coxiella burnetii had been detected in their herd. On 25 May 2011, the county health department reported a symptomatic patient with antibodies to *Coxiella burnetii* who had purchased goats from the farm in February 2011. On 27 May 2011, a report from Montana identified a child seropositive for *Coxiella burnetii* whose family had purchased goats from the Washington farm in October 2010; one of the goats aborted triplets 2 weeks before the child's 12 May 2011, illness onset. On 31 May 2011, 5 more persons reported onset of symptoms compatible with Q fever from late March to mid-May 2011, following exposure at a Montana farm to goats purchased from the Washington farm at various times during October 2010-January 2011. On 10 June 2011, the Washington State Department of Health and Montana Department of Public Health and Human Services requested CDC assistance to characterize the extent of the outbreak, distribute Q fever information, and identify others at risk for infection. Goats sold after June 2010 by the Washington farm where *Coxiella burnetii* initially was detected were traced to 21 farms in Washington (10 counties), Montana (3 counties), and Oregon (1 county). 17 farms participated in the outbreak investigation. *Coxiella burnetii* infection was detected in 16 of 17 goat herds, including polymerase chain reaction confirmation of bacterial shedding in feces, vaginal mucous, or milk in 161 of 667 (24 percent) goats tested and an overall seroprevalence of 21 percent (131 of 615) by enzyme-linked immunosorbent assay. To date, 19 percent (20 of 108; 11 in Washington and 9 in Montana) of serologically tested persons met the outbreak case definition of a person epidemiologically linked to at least 1 farm of interest (i.e., as a goat owner, farm visitor, or neighbor) since January 2011 with a *Coxiella burnetii* phase II immunoglobulin G titer =1:128 by immunofluorescence assay (1). No deaths were reported; 4 of the 20 persons were hospitalized, and 5 were asymptomatic. Both states implemented a herd management plan to promote continued communication between public health and agricultural authorities and to advise goat owners to disinfect birthing areas, avoid contact with birth products, limit visitor access to animal holding areas, maintain an animal registry, and report animal abortions and positive Q fever test results to state authorities. All homes within a 1-mile radius of the Washington farm where *Coxiella burnetii* was initially detected and a Montana farm that also had high goat seroprevalence linked to human illness were visited once by CDC or by county public health officials and CDC in July or August 2011 to provide Q fever health education and offer human serologic testing. The states have received no additional reports of Q fever since July 2011. Q fever (a category B bioterrorism agent) is a nationally notifiable disease in humans and is endemic throughout the USA with a national seroprevalence of 3 percent (2). Washington and Montana typically report about 3 cases of Q fever annually. Acute Q fever is characterized by a self-limited febrile illness or, less often, by pneumonia or hepatitis. Less common still is chronic Q fever, which affects less than 5 percent of infected persons and presents as endocarditis in patients with preexisting valvular disease. Pregnant women, immunosuppressed persons, and patients with a preexisting heart-valve defect are at greatest risk for chronic Q fever. Doxycycline is recommended for treatment of acute Q fever. *Coxiella burnetii* is highly infectious, persists in the environment, and can travel for miles once windborne (3). Transmission can occur via inhalation of contaminated aerosols or dust; human-to-human transmission is rare. Cattle, sheep, and goats are the primary Q fever reservoirs. Continued community awareness is essential for disease prevention and control. (Q Fever is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

JAPANESE ENCEPHALITIS (INDIA): 9 October 2011, Encephalitis, a deadly viral disease, has killed hundreds of people, many of them children, in the past 2 months in India, health authorities said. Gorakhpur in the northern state of Uttar Pradesh has been the worst hit so far with more than 370 reported dead, NDTV television channel reported Sunday [9 Oct 2011]. The broadcaster said the disease appeared to be spreading outside the state with Delhi and Chandigarh areas reporting similar cases. CNN-IBN, quoting public health experts, reported that although the water or mosquito-borne viral disease has been concentrated in the eastern parts of Uttar Pradesh for years, claiming hundreds of lives each year, the epidemic has been badly mismanaged as the state is one of the poorest in the country. The network said pediatric hospitals in the Gorakhpur area are unable to handle the rush of encephalitis patients. "Every day we have to cope with this situation and this has been going on for the last 2 months. The number of patients is so large we cannot cope with the resources we have," said one pediatrician at the BRD Medical College and Hospital. The network said the hundreds of patients admitted to various hospitals are suffering either from the mosquito-borne Japanese encephalitis or its water-borne strain [enteroviruses]. The situation is repeated year after year in the state during the monsoon season and the epidemic has still not been contained, CNN-IBN reported. The report said the state government has allocated more than USD 5 million to handle the current crisis, but Dr RN Singh, who has been fighting to eradicate the disease, says it is too little too late. He says he is fed up as the issue has not yet been taken up as an emergency on a national scale. (Viral Encephalitis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

TOXIC FISH (SUEZ): 12 October 2011, A total of 5 members of one family from Suez have (been diagnosed with) acute food poisoning, from eating a meal of a toxic fish which is banned from hunting or eating. These fish are highly toxic and kill within hours unless the antidote is given in a timely manner. Major General Adel Rifaat, Security Director of Suez had received a communication from the Suez General Hospital stating the arrival of 5 members of one family, who showed symptoms of acute poisoning as a result of eating a meal of fish. On a related matter, there are currently warnings in the governorates of Suez and the Red Sea to refrain from eating the [Alakrbah] fish. The General Union of Fishermen has said to refrain from fishing of many species of poisonous fish in the waters of the Red Sea and Gulf of Suez and the Lakes region, which cause poisonings. This fish is also known as "sea-chicken" or "sea cat." (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

FOODBORNE ILLNESS (AFGHANISTAN): 13 October 2011, Food poisoning has sickened 206 NATO soldiers who ate in a German army canteen at Mazar-i-Sharif in northern Afghanistan, defense authorities in Berlin said Thursday, 13 Oct 2011. They said the 138 Germans and 68 military from other nations quickly had quickly recovered from the symptoms and overall fighting strength was not affected. All had eaten Wednesday, 12 Oct 2011, at the canteen in the ISAF regional headquarters in Mazar-i-Sharif. The kitchen was disinfected and preparation of meals resumed there on Thursday, 13 Oct 2011. Army scientists were still hunting for the source of the infection. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmh.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmh.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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